

References

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- ² Information and Statistics Division, Common Services Agency, Scottish Health Service, 1987. Personal communication.
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Modern epidemiology?

SIR—I share Elwood's high regard for Rothman's *Modern epidemiology* (1987; 41: 263), and am at present treating myself to a refresher course on it (much reassured in the process by the author's confidence in my statistical capability). However, as a guide to modern epidemiology the book has serious limitations. As it reflects powerful currents in our discipline, particularly in the United States, perhaps you will allow me briefly to indicate what, to my mind, are some of these limitations.

The student coming to it afresh could not gather that epidemiology is the basic science of public health. Thus in close on 150 years of epidemiological research (Dr Rothman doesn't have much space for history) it continues plausible that the main determinants of the health of populations and sizable subgroups in them are their economic-social-cultural conditions. The data on this are mostly cross-sectional and inevitably derived from studies of populations and groups as the unit, rather than from aggregation of individuals with their various attributes. This, plus the maze of intercorrelated variables involved in the standard of living, and much other "noise", leads often to unacceptable uncertainty (and is one factor in sometimes bruising controversy). Has Dr Rothman any modern ideas on how progress is to be made—truly "general" causes distinguished—the strength of specific factors here determined—and so on? The issues are unlikely to go away; more likely on present social trends they will be aggravated (in the United States as in this country).

One of the main features of the Third Age public health which we are now enjoying, or the "new public health" as many call it, is the salience of lifestyles in diet and exercise, smoking and drinking, social networks and support systems, etc. These, of course, are much implicated in the above economic, social, and cultural situations. They also raise sharply the need for epidemiology to assimilate concepts and methods from the social and behavioural sciences and to collaborate with these. In much worthy effort to this

end over the past 40 years the results, with few exceptions, have been only modest. Can Dr Rothman offer any epidemiologic ideas on the nature of the difficulties? Are we asking the wrong questions of each other? What next?

Another grand feature of the Third Age is the contribution of medical care to the *health* of the population throughout life but greater, of course, in later life. Huge expenditures of time, money, and effort in health services research have again yielded but moderate dividends, on such crucial issues as the outcomes of services for the elderly, for example. The challenge to epidemiology is plain and becoming more urgent as "economics" progressively dominates. It is only too evident that there are serious problems for us in methodology, but status problems too. What can be learned from critical analysis of past successes in this field? Do the aetiologic studies, superbly described by Dr Rothman, indicate possible lines of advance? Can we better define the scope for experiment?

The hungry sheep . . .

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PS Having devoted the greater part of my professional life to it, much indeed in pursuit of a single factor, I hope it is unnecessary to add that none of this is to gainsay the importance of disease-specific analytic and aetiological research.

Multiple sclerosis on islands

SIR—It seems that rates of multiple sclerosis (MS) are higher in island populations than in control mainland populations at the same latitude.^{1 2} This suggestion is consistent with the idea that MS is a sequel of some rather uncommon infection which has subsequent deleterious consequences only if it is first contacted later than usual in life. This hypothesis has been noted to fit the high concordance rate in dizygotic twins as contrasted with the sib risk;³ and the suggestion that first borns are at greater risk than others.⁴

Lastly, epidemics have been described in Iceland and the Faroes, and possibly the Orkney Islands and Shetlands,⁵ which were suspected of somehow being initiated by the temporary immigration of British troops. I suggest that, in the absence of large-scale immigration, the pathogen will not have a large enough pool of infection to sustain itself on islands. Hence when large-scale immigration occurs, it gets reintroduced and the age at which residents first get infected will be higher than in the mainland